

To Combat Counterfeiting and Enhance Supply Chain Efficiency by Leveraging RFID in the Context of Bangladeshi Garment Industry

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Abstract:

Supply chain Management (SCM) is an evolving business area in developing and developed countries, with technological advancements including AI, 3-D printing, IOT, and RFID. Despite these advancements, this study focuses on how RFID can ensure authenticity through quality and performance in the garment industry. RFID (Radio Frequency Identification) is an emerging technology that can help enterprises in their SCM operations by assisting with accurate product identification and tracking and potentially improving product availability through wireless communication. One of the critical threats to SCM is counterfeiting, which costs billions in revenue, loses brand trust and impacts the garment industry's governance system. This study explores how businesses can improve supply chain efficiency and transparency by leveraging RFID for product tracking and authentication from product making to shipment, delivery and selling in real time. The findings emphasise the potential of RFID to increase economic efficiency, improve labour conditions, and enhance sustainability within the apparel sector, contributing to more secure and transparent supply chains globally, especially in the context of Bangladesh.

Key Word: SCM (Supply Chain Management), IOT (Internet of Things), RFID (Radio Frequency Identification), AI (Artificial Intelligence)